

DESCRIPTIONS OF EIGHT NEW SPECIES OF TRICHOPTERA.

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Collections of Trichoptera recently examined by the writer have disclosed a number of new species eight of which are described herein. In addition new and interesting distributional records of several related species are included. Unless otherwise designated types of the new species are in the writer's collection at the University of Wyoming.

Neureclipsis timesis, n. sp.

This species is most closely related to *crepuscularis* (Walker) but differs markedly from it and other described species in the elongate cercus, the bifid tenth tergite, the structure of the aedeagus and several other details of the genitalia.

Male.—Length 6.5 mm. Color of wings and appendages luteus. General characteristic typical for genus. Genitalia as in fig. 1. Base of ninth sternite wide, gradually narrowed dorsally to an acutely triangular projection. Tenth tergite semimembraneous, directed dorso-caudad, divided into a pair of lateral lobes when seen from dorsal or ventral aspect, apices bearing several long setae; ventral corner projected caudad, directly above aedeagus, as an acute, very lightly sclerotized acuminate process, bearing several long setae along margin. Cerci directed ventrad, narrow, elongate, undulating margin, apex broadly rounded; apices convergent when seen from ventral or dorsal view. Clasper with ventral margin straight for about one-half its length, then rather abruptly turned dorsad, apex with a narrow blunt point; mesal surface of ventral margin closely studded with thick dark brown setae. Aedeagus tubular, basal portion broad, apical part curved slightly ventrad; apex with a pair of lateral caudad curved hooks, and between them a slender tubular process which is directed caudo-ventrad.

Holotype. Male.—Amherst, Massachusetts, June 22, 1941, Light trap.

Allomyia stylata, n. sp.

This species, the third described in the genus, is much larger than *tripunctata* (Banks) (10 mm.) or *renoa* Milne (7.5–8 mm.), its length being 13 mm. Spurs 1–3–4. General color of forewings

brown, setae sparse, a large distally rounded white spot near fork of M, a white spot where Anals join margin, a narrow white spot along r-m, and a series of small white spots in vicinity of R and Sc. Body, antennae and palpi dark brown, tibia and tarsus luteus as in *tripunctata*. Also, as in *tripunctata*, the underside of the inner margin of the forewings with a series of long slender black setae which reach to Anal veins. Veination essentially similar to that illustrated by Betten (1934).

Genitalia as in fig. 2. Ninth segment annular, practically same width throughout; ninth tergum gives rise to a single long, stout, caudad directed style; directly beneath this arises a narrow bifid projection, seen from dorsal aspect, fig. 2A. Basal segment of clasper tubular, directed dorso-caudad, ventral corner with a group of dense setae; apical segment divided into a long dorsal branch whose ventral surface is flattened, and a ventral branch about one-half the length of the upper and whose dorsal surface is flattened. The dorsal branch of the apical segment of the clasper is directed dorso-caudad, the ventral surface densely covered with short stout teeth, viewed dorsally, fig. 2, about the same width throughout and apically rounded; the ventral branch is directed caudad, its apical margin and the apical portion of its dorsal face with dense short teeth. Base of clasper, from ventral aspect, fig. 2C, bears a long stout arcuate, apically acute style which arises from its mesal corner. Cerci relatively short, leaf-like from dorsal view, fig. 2D. Tenth tergite distally bifid, apically subacute, fig. 2D, extending caudad beyond lower branch of clasper. Aedeagus tubular at base, distally narrowed and acute, directed caudad almost to lower branch of clasper; apex bifid from ventral view; about midway a pair of stout acuminate spines arise from dorso-lateral part of aedeagus and extend caudad for one-half remaining length, fig. 2B.

Holotype. Male.—Albany County, Wyoming, University Summer Camp, Snowy Range Mountains, July 10, 1941, Light trap, elevation 9600 feet, (W. B. Owen).

Allomyia tripunctata (Banks)

For purposes of comparison the genitalia of this species is figured from a male collected at Glacier, British Columbia, July 20, 1901, (R. C. Osburn). The lateral aspect of the genitalia, the fused tenth tergite, the ventral aspect of the basal segment of the clasper with its prominent mesal spine and the peculiar aedeagus with its pair of large dorsal spines is shown in figs. 3, 3A, 3B. The female has not been described.

***Chyranda parvula*, n. sp.**

This is the second species described in the genus, the previously described species, *centralis* (Banks) being known only from the Rocky Mountain area of the United States. This species can be differentiated from *centralis* by its much smaller size and lighter color, and in several details of the genitalia.

Male.—Length 11 mm., as compared to 15 mm. in *centralis*. Forewings light luteus, body, legs, palpi luteus; in general considerably lighter colored than *centralis*.

Genitalia as in fig. 4. Since the genitalia of the two species are similar corresponding portions of each are illustrated for comparison. From lateral view cerci sub-ovate, setae sparse. Tenth tergite, from lateral view, plate-like, gradually narrowed distally, apex blunt, while in *centralis* the apices are narrowed much more acutely. Viewed dorsally, figs. 4, 4A, the processes of the tenth tergite are widely separated and gradually divergent, the structure between their base having a short apical incision, while in *centralis*, figs. 5, 5A, the processes are close together, only the apices are divergent and the structure between their base is subacute. Claspers with mesal margins convergent and appressed along caudal aspect of segment, seen from caudo-lateral view, fig. 4B, claspers nearly rectangular, more so than in *centralis*, fig. 5B. Aedeagus and lateral arms very similar in each species.

Holotype. Male.—Brandy Brook, Gaspé, Quebec, August 6, 1937, 1500 feet elevation, (C. P. Alexander).

***Neophylax splendens*, n. sp.**

This handsome species is closely related to *rickeri* Milne, from which it can be distinguished by the shorter tenth tergite, the longer claspers and several other details in the male genitalia. This species is also considerably smaller than *rickeri*, the latter species having a length of 15.5 mm., while *splendens* varies from 12 to 14 mm.

Male.—Head, body, antennae and palpi light brown, legs yellowish, inner spur of hind legs with a modification very similar to *rickeri*,—a thin, wide plate distally divided into two parts, each acuminate. Wings dark brown with a pronounced irrorate pattern. Seventh sternite with a broad, apically rounded mesal process, fig. 6A; very similar to *rickeri*. Genitalia as in fig. 6. Ninth segment narrow, produced on meson into a triangular projection which is directed caudo-dorsad, each margin gives rise to a dense brush of

yellowish setae, fig. 6B; the structure dorsad to this sternite, the probable cerci, is triangular, bluntly acute from lateral aspect, fig. 6, from dorsal aspect the apical half is curved mesad. Tenth tergite from lateral aspect wide, dorsal margin arcuate, lightly sclerotized, divided entire length. Claspers approximately triangular, projecting caudad beyond any other part of genitalia, apex blunt, directed slightly ventrad; from dorsal aspect base broad, apical portion curved mesad, fig. 6C. From caudal view the portion of segment between claspers and ninth sternite presents a very irregular roughened surface, as in *rickeri*, this surface appears minutely serrate from lateral aspect.

Female.—Very similar to male in general appearance. Subgenital plate with a mesal pair of slender, sub-acute lobes and a pair of long slender lateral lobes, apices slightly convergent and lightly sclerotized, fig. 6D. Dorsally tenth tergite with a narrow emargination.

Holotype. Male.—Mountain stream south of Sheridan, Wyoming, September 17, 1947, (R. E. Pfadt).

Allotype. Female.—Same data as for Holotype.

Paratypes.—Same data as for Holotype, except collected by D. G. Denning, 2 males 1 female. Medicine Bow Nat. Forest, South Brush Picnic Grounds, Carbon County, Wyoming, September 23, 1947, (R. E. Pfadt), 1 female.

One male Paratype deposited in the Illinois Natural History Survey Collection.

Neophylax rickeri Milne

For purposes of comparison the male genitalia of a specimen from the type lot, kindly presented to the writer by Dr. H. H. Ross, is shown in figs. 7, 7A. Additional records as follows:

Idaho: Wallace, September 27, 1935, (Otto Huelleman), 1 male; Wallace, October 24, 1937, (Otto Huellemann), 1 male.

Neophylax aniqua Ross

This recently described species was previously known only from Quebec.

New Hampshire: Ammonoosuc Ravine, White Mountains, elevation 4700 feet, July 2, 1944, (J. F. Hanson), 1 male; Tuckerman's Ravine Trail, White Mountains, elevation 2100 feet, September 4, 1940, (J. F. Hanson), 1 male.

Neophylax autumnus Vorhies

Known from Illinois, Michigan, New York, Ontario and Wisconsin, according to Ross (1944).

Minnesota: Cass County, September 12, 1935, light trap, (R. H. Nagel), 1 male.

Pennsylvania: Camphill, November 15, 1916, (E. Daecke), 2 males.

Quebec: June, 1 male.

Neophylax consimilis Betten

Previously known only from New York, from which it was originally described.

Massachusetts: Conway, September 9, 1938, (J. F. Hanson), 1 male.

Neophylax fuscus Banks

In addition to the states recorded by Ross (Missouri, Michigan, New Hampshire, and Virginia) the following record is added.

Minnesota: Savage, Credit River, reared, September 20, 1935, (D. G. Denning), 1 male.

Neophylax nacatus Denning

This species has not been recorded in the literature since it was originally described from Vermont and New Hampshire.

Massachusetts: Paradise Brook, Mt. Toby, October 21, 1938, (J. F. Hanson), 1 male.

Neophylax oligius Ross

This species was originally described from Michigan and Wisconsin.

Minnesota: Rutledge, Pine County, September 4, 1936, (R. H. Daggy), 1 male; Lake County, Baptism Creek, August 21, 1920, (H. H. Knight), 1 female.

New York: Tuxedo, September 6, 8, 12, 15, 16, 1928, (F. E. Watson), 5 males, 5 females.

Psilotreta hansonii, n. sp.

This species is closely related to *indecisa* (Walker) and *frontalis* Banks; it also bears some resemblance to *labida* Ross. From all those species it can be differentiated by the shape of the tenth tergite

and in the number and positions of the spines on the apical segment of the clasper.

Male.—Length 12mm. Color of wings uniformly brownish, body a trifle darker and appendages a trifle lighter. Second segment of maxillary palpi with a long mesal brush extending the length of the third segment, fifth segment with a dense mass of black hair closely appressed to it its entire length. Male genitalia as in fig. 8. Dorsal portion of ninth segment long and narrow, acute distally, fused with tenth. Base of tenth tergite with a pair of heavily sclerotized curved, ventrad directed hooks; a short distance beyond the tergite has a narrow deep incision, fig. 8, and at this point the tergite is divided into a pair of thin pointed plates, their apices divergent from dorsal view, fig. 8A. Cerci rather long, gradually narrowed from base. Clasper with basal segment cylindrical and narrowed apically; apical segment short, bearing 4 black heavily sclerotized teeth, from lateral view a dorsal and ventral tooth of nearly equal size; from ventral view, fig. 8, mesal tooth short, only slightly longer than others. Basal half of aedeagus narrow, tubular; distal half suddenly and greatly enlarged, curved ventrad.

Holotype. Male.—Amethyst Brook, Pelham, Massachusetts, June 19, 1938, (J. F. Hanson).

This species is named in honor of Mr. J. F. Hanson who, through his extensive collecting of the Trichoptera, has made so many contributions to our knowledge of the group.

EXPLANATION OF PLATE VI

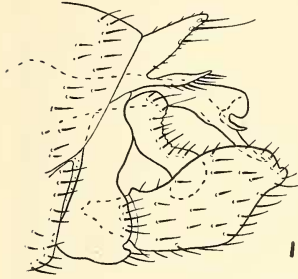
FIG. 1. *Neureclipsis timesis*, male genitalia, lateral aspect.

FIG. 2. *Allomyia stylata*, male genitalia, lateral aspect; 2A, dorsal aspect ninth segment; 2B, aedeagus; 2C, ventral aspect ninth segment, base of claspers; 2D, dorsal aspect of tenth tergite and cerci.

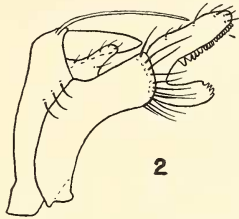
FIG. 3. *Allomyia tripunctata*, male genitalia, lateral aspect; 3A, dorsal aspect of tenth tergite; 3B, aedeagus.

FIG. 4. *Chyranda parvula*, dorsal aspect of tenth segment; 4A, dorsal aspect of tenth tergite; 4B, caudo-lateral aspect of clasper.

FIG. 5. *Chyranda centralis*, dorsal aspect of tenth segment; 5A, dorsal aspect of tenth tergite; 5B, caudo-lateral aspect of clasper.



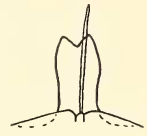
NEURECLIPSIS TIMESIS



2



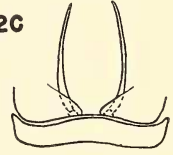
2A



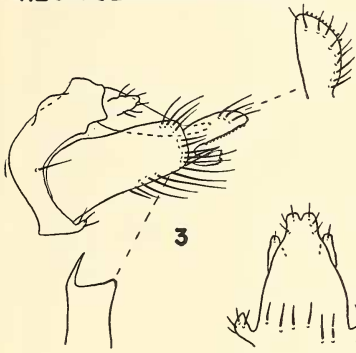
2C



2B



2D



3

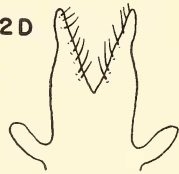
ALLOMYIA STYLATA



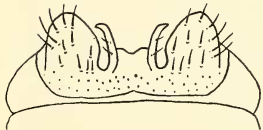
3A



3B



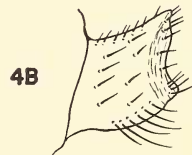
ALLOMYIA TRIPUNCTATA



4

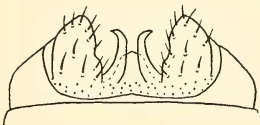


4A



4B

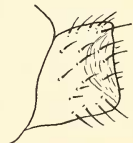
GHYRANDA PARVULA



5



5A



5B

GHYRANDA CENTRALIS

Oecetis pratelia, n. sp.

This species is closely related to *inconspicua* (Walker) from which it can be readily distinguished by the elongate, prominent tenth tergite, the lateral aspect of the ninth segment and minor differences in the cerci and claspers. Length 8.5 mm. Color of wings uniformly light brown, appendages slightly lighter in color. General appearance of adult closely resembles *inconspicua*. Genitalia as in fig. 9. Basal portion of ninth segment narrow, dorsal part slightly wider, apical margin produced into a sub-acute angulation, reaching caudad approximately one-half length of cercus. Cerci, from dorsal aspect, closely appressed most of length, ovate in appearance, covered with short setae. Tenth tergite large and prominent, viewed laterally the ventral corner is produced into a large rounded lobe; from dorsal aspect, fig. 9A, lateral lobes divergent, the mesal portion nearly truncate and bearing a group of small setae at each corner. Clasper with the base wide, giving rise to a short dorsal lobe, the structure continues as a narrowed, sub-acute, dorso-caudad directed apex; from ventral view apices gradually convergent; base of claspers separated by a small truncate process. Aedeagus very similar in appearance to *porteri* Ross and *inconspicua* (Walker); ventral margin produced into two hook-like processes; internal sclerotized rod with basal part tubular, apical part acuminate, basal portion directed caudad, then sharply curved mesad and finally ventrad to the ventral margin.

Holotype. Male.—La Belle, Florida, July 16, 1939, (R. H. Beamer).

EXPLANATION OF PLATE VII

FIG. 6. *Neophylax splendens*, male genitalia, lateral aspect; 6A, mesal process of seventh sternite; 6B, ventral aspect of ninth sternite; 6C, dorsal aspect of claspers; 6D, female genitalia, ventral aspect.

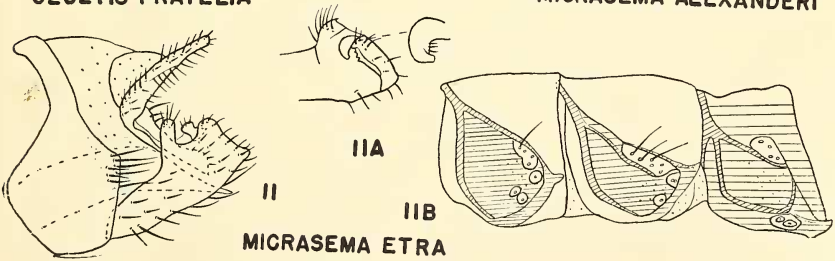
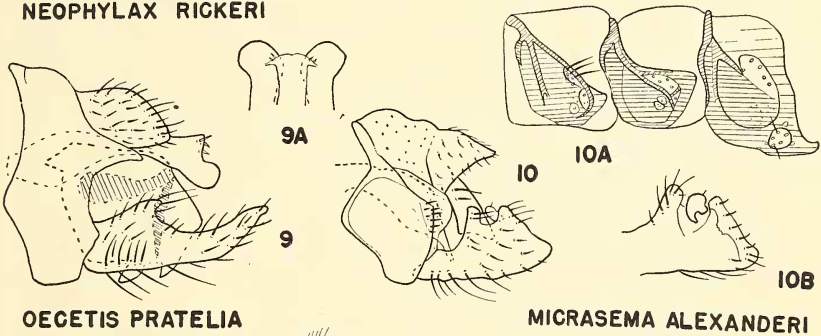
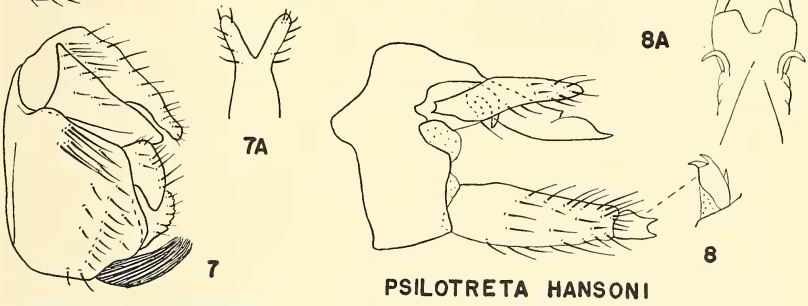
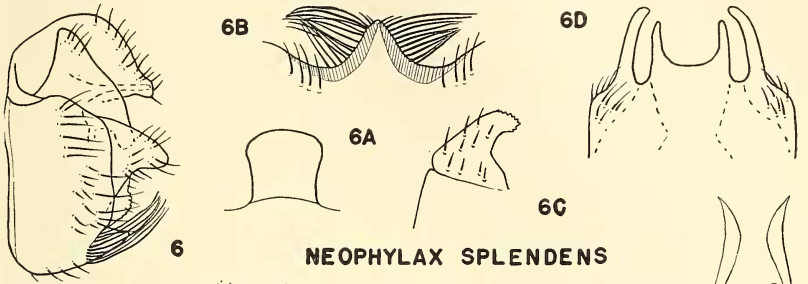
FIG. 7. *Neophylax rickeri*, male genitalia, lateral aspect; 7A, dorsal aspect of tenth tergite.

FIG. 8. *Psilotreta hansonii*, male genitalia, lateral aspect; 8A, dorsal aspect of ninth and tenth tergites.

FIG. 9. *Oecetis pratelia*, male genitalia, lateral aspect; 9A, dorsal aspect of tenth tergite.

FIG. 10. *Micrasema alexanderi*, male genitalia, lateral aspect; 10A, sixth, seventh and eighth abdominal tergites; 10B, mesal aspect of clasper.

FIG. 11. *Micrasema etra*, male genitalia, lateral aspect; 11A, mesal aspect of clasper; 11B, sixth, seventh and eighth abdominal tergites.



Micrasema alexanderi, n. sp.

This species is most closely related to *bactro* Ross. In the recent key by Ross (1947) to the Nearctic *Micrasema* this species keys to *bactro* from which it can be easily separated by the configuration of the sixth, seventh and eighth abdominal tergites, the shape of the tenth tergite, the widely separated cerci and the three distinct processes which arise from the dorso-mesal margin of the clasper.

Male.—Length 5 mm. General color black, appendages practically the same color. Genitalia as in fig. 10. Abdominal tergites, sixth, seventh and eighth as in fig. 10A, each with a sclerotized crescentic thickening which reduces the dorsal half of each tergite to a narrow strip, similar to that described for *diteris* Ross and *bactro* Ross. Ninth segment reduced dorsally to a narrow sclerotized edge. Cerci with their base widely separated, projected directly caudad, ventral surface slightly concave. Between and ventrad to base of cerci appears a triangular protuberance which bears four large setae, at its base arises a prominent spine set on a long slender tubercle. Tenth tergite fused on meson, along line of fusion sclerotization very light; apex emarginate, each lateral lobe with four dorso-cephalad directed setae. Claspers with base narrow, apical part fully twice as wide as base; meso-dorsal margin with three lobes, the center one being in the form of an acute ventrally curved hook, best seen from mesal aspect, fig. 10B, or from dorsal view; apex broad and truncate with the ventral corner produced into a sub-triangular lobe; mesal face of clasper concave; viewed ventrally apices convergent. Aedeagus tubular, apical portion flattened and spatula-like, apex rounded.

Holotype. Male.—Yellowstone National Park, Wyoming, Emerald Pool, July 12, 1942, (C. P. Alexander).

I take pleasure in naming this species in honor of the collector, Dr. C. P. Alexander.

Micrasema etra, n. sp.

This species is closest to *bactro* Ross but differs from it in the sclerotized thickenings of the abdominal tergites, six, seven and eight, and also in differences in the cerci, tenth tergite and the clasper. Length 6 mm. Wings, body and appendages dark brown. Each lateral portion of the sixth to eighth abdominal tergites enclosed by a series of sclerotized thickenings, fig. 11B, similar to but markedly different from *bactro* Ross; sixth sternite with a small mesal projection. Dorsal portion of ninth segment reduced to a narrow quite heavily sclerotized strap; seen from either dorsal or ventral view the apical margin, at point where reduction of segment

commences, is produced into a short tubercle bearing several long setae. Cerci widely separated at base, directed dorso-caudad, only the lateral margin discernible from lateral aspect; ventral surface slightly concave. Base of tenth tergite wide at base, flared dorsad into a ridge bearing a number of setae, only slightly narrowed distally, apical margin emarginate, each lateral lobe slightly upturned and bearing five setae. Clasper widened and truncate at apex, the apico-dorsal margin subdivided into three lobes, the most cephalad about the same width throughout, the center one curved mesad and then ventrad as a heavily sclerotized hook, the blunt apex turned caudad, fig. 11, the most caudad lobe curved mesad and slightly ventrad; seen from mesal aspect as in fig. 11A; the inner surface strongly concave. Aedeagus with apical portion flattened, apex sub-triangular, basal part tubular.

Holotype. Male.—Yellowstone National Park, Wyoming, Emerald Pool, July 12, 1942, (C. P. Alexander).

***Micrasema aspilus* (Ross)**

This species has not yet been recorded from Colorado.

Colorado: Walden, August 10, 1947, (D. G. Denning), 1 male; Poudre River, 15 miles west of Ted's Place, August 17, 1947, (D. G. Denning), 1 male.

***Micrasema charonis* Banks**

This species was originally described from North Carolina.

Tennessee: Greenbriar Cove, Great Smoky Mountains, May 15, 1938, (I. Williams), 1 male.

***Micrasema rusticum* (Hagen)**

This fairly common species has not yet been recorded from Minnesota, Manitoba, and Massachusetts.

Minnesota: collected from widely scattered localities in the northern and central part of the state, only during May.

Manitoba: Pigeon River, Sturgeon Falls, June 6, 1942, (Ferris Neave), 1 male.

Massachusetts: N. Amherst, June 9, 1938, (J. F. Hanson), 1 male.

***Micrasema wataga* Ross**

This species was originally described from Tennessee, New York and North Carolina.

North Carolina: Ela, May 30, 1941, (S. S. Easter) 1 male.

Minnesota: Cloquet, July 14, 1938, (D. G. Denning), 1 male.